

## Barton County

### Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors

6/22/17

Using the most recent IMPLAN data available (2015) adjusted for 2017, 19 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Barton County economy.<sup>1</sup>

These 19 sectors have a total direct output of approximately **\$814.3 million** and support **1,503.4 jobs** in Barton County. Running the model for all 19 sectors simultaneously produces the following results:

Agriculture, Food, and Food Processing Sector Contribution to Overall Barton County Economy						
Impact Type <sup>2</sup>	Employment	% Employment	Total Value Added <sup>3</sup>	Total Value Added % of Gross Regional Product <sup>4</sup>	Output <sup>5</sup>	Output % of Gross Regional Product
Direct Effect	1,503.4	7.08%	\$141,238,551	10.06%	\$814,334,978	58.01%
Indirect Effect	958.9	4.51%	\$77,658,392	5.53%	\$145,492,322	10.36%
Induced Effect	501.3	2.36%	\$31,735,050	2.26%	\$58,110,334	4.14%
<b>Total Effect</b>	<b>2,963.6</b>	<b>13.95%</b>	<b>\$250,631,993</b>	<b>17.85%</b>	<b>\$1,017,937,634</b>	<b>72.51%</b>

As shown in the above table, agriculture, food, and food processing sectors support **2,963.6 jobs**, or **13.95%** of the entire workforce in the county. These sectors provide a total economic contribution of approximately **\$1.0 billion**, roughly **72.51% of the economy**.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 17 agriculture, food, and food processing sectors is approximately **\$250.6 million**, or **17.85% of the GRP**. This indicates that personal income, business income, and taxes generated by these sectors account for **17.85% of the total economy**.

The following tables document the overall summary numbers of the model, top industries affected by employment and output, and a listing of all industries that were analyzed.

<sup>1</sup> Article on building a contribution analysis in IMPLAN that avoids double counting:

[http://www.implan.com/index.php?option=com\\_content&view=article&id=660%3A660&catid=253%3AKB33&Itemid=70](http://www.implan.com/index.php?option=com_content&view=article&id=660%3A660&catid=253%3AKB33&Itemid=70)

<sup>2</sup> Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

<sup>3</sup> Value added = labor income + indirect business taxes + other property type income.

<sup>4</sup> GRP = final demand of households + governments expenditures + capital + exports - imports - institutional sales.

<sup>5</sup> Output = intermediate inputs + value added.

In the top ten agriculture, food, and food processing sectors by employment, the beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming sector is the top employer with **599.8 employees**. This table also shows the amount of jobs that are created by the agriculture industry in Barton County.

Top Ten Agriculture, Food, and Food Processing Sectors by Employment		
Sector	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	599.8	\$184,228,280
Dog and cat food manufacturing	278.2	\$376,766,698
Wholesale trade	159.8	\$35,432,972
Animal, except poultry, slaughtering	149.3	\$107,154,749
Landscape and horticultural services	147.1	\$5,863,619
Truck transportation	133.3	\$24,372,733
Support activities for agriculture and forestry	126.2	\$9,909,060
Extraction of natural gas and crude petroleum	81.2	\$10,593,983
Real estate	80.7	\$11,952,062
Grain farming	76.8	\$67,002,504

The dog and cat food manufacturing sector directly contributes approximately **\$376.8 million** to the Barton County economy. The table below also shows the amount of revenue that is generated in other industries by having a strong agriculture industry.

Top Ten Agriculture, Food, and Food Processing Sectors by Output		
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Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	599.8	\$184,228,280
Animal, except poultry, slaughtering	149.3	\$107,154,749
Grain farming	76.8	\$67,002,504
Wholesale trade	159.8	\$35,432,972
Truck transportation	133.3	\$24,372,733
Animal production, except cattle and poultry and eggs	64.4	\$17,743,564
All other crop farming	74.6	\$13,550,683
Oilseed farming	4.6	\$12,896,320
Other animal food manufacturing	8.8	\$12,006,109

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture, food, and food processing sector and the output they contributed to the Barton County economy.

<b>All Agriculture, Food, and Food Processing Sectors</b>		
<b>Sector</b>	<b>Total Employment</b>	<b>Total Output</b>
Oilseed farming	4.6	\$12,896,319.39
Grain farming	76.8	\$67,002,502.44
Vegetable and melon farming	0.1	\$30,594.15
Fruit farming	0.5	\$61,701.55
Greenhouse, nursery, and floriculture production	1.3	\$233,926.61
All other crop farming	74.6	\$13,550,683.02
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	599.8	\$184,228,271.48
Dairy cattle and milk production	14.7	\$7,715,357.78
Poultry and egg production	0.7	\$871,574.52
Animal production, except cattle and poultry and eggs	64.4	\$17,743,562.70
Commercial logging	1.9	\$78,528.46
Dog and cat food manufacturing	278.2	\$376,766,693.12
Other animal food manufacturing	8.8	\$12,006,109.24
Animal, except poultry, slaughtering	149.3	\$107,154,747.01
Bread and bakery product, except frozen, manufacturing	17.7	\$2,014,196.63
Frozen cakes and other pastries manufacturing	1.2	\$178,904.94
Wineries	1.9	\$450,730.17
Veterinary services	59.7	\$5,486,936.57
Landscape and horticultural services	147.1	\$5,863,619.33

All 105 counties in Kansas have an IMPLAN model and an agriculture, food, and food processing contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Barton County, the retail sector was omitted.